

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) Apparatus for induction heating of pieces or blanks (10) of electrically conducting and non-magnetic material, comprising a device for creating a static magnetic field (3) and a device (2) for causing a relative movement (4) between the piece or blank (10) and the static magnetic field (3), so that current (12) is induced in the piece or blank (10) which thereby is being heated up, wherein the device for creation of the static magnetic field (3) comprises at least one coil (52,53) comprising windings of superconducting material.
2. (Previously Presented) Apparatus according to claim 1, wherein the at least one coil (52,53) is adapted to entirely or partially surround the piece or blank (10).
3. (Currently Amended) Apparatus according to claim 1-~~or~~2, wherein the at least one coil (52,53) has annular sections surrounding the piece or blank (10) and being connected in anti-parallel, so that the static magnetic field (32), which is created, varies in axial direction, the device (2) for relative movement being arranged to cause a relative linear movement (42) in the same axial direction between the piece or blank (10) and the static magnetic field (32).
4. (Currently Amended) Apparatus according to claim 1-~~or~~2, wherein the device for creating of the static magnetic field (3,31) further comprises at least one permanent magnet (51).
5. (Previously Presented) Apparatus according to claim 4, wherein the at least one permanent magnet (51) is included in an annular permanent magnet device arranged to surround the piece or blank (10).
6. (Previously Presented) Apparatus according to claim 5, wherein the annular permanent magnet device (51) comprises several poles, for example four, so that the magnetic field (31), that is created, is directed into and out of the piece or blank (10) several times along its periphery, the device (2) for relative movement being arranged to cause a relative rotational movement (4) between the piece or blank (10) and the static magnetic field (31).

7. (Previously Presented) Apparatus according to claim 5, wherein the annular permanent magnet device comprises a number of annular sections, so that the static magnetic field, that is created, varies in axial direction, the device (2) for relative movement being arranged to cause a relative linear (42) movement in the same axial direction between the piece or blank (10) and the static magnetic field.

8. (Currently Amended) Apparatus according to ~~any one of claims 1-7~~ claim 1, wherein the device (2) for relative movement is arranged to move the piece or blank (10) in relation to the static magnetic field (3,31,32).

9. (Currently Amended) Apparatus according to ~~any one of claims 1-7~~ claim 1, wherein the device for relative movement is arranged to move the device for creation of the static magnetic field (3,31,32) in relation to the piece or blank (10).

10. (Currently Amended) Apparatus according to ~~any one of claims 1-9~~ claim 1, further comprising a device for creation of an alternating magnetic field, so that the static magnetic field (3,31,32) is combined with the alternating magnetic field thereby having a common effect on the piece or blank (10).

11. (Previously Presented) Method for induction heating of pieces or blanks (10) of electrically conducting and non-magnetic material, comprising the following steps:

- creating a static magnetic field (3,31,32), and
- causing a relative movement (4,41,42) between the piece or blank (10) and the static magnetic field (3,31,32), so that current (12,12A) is induced in the piece or blank (10) which thereby is being heated up, wherein the static magnetic field (3,31,32) is being produced by at least one coil (52,53) comprising windings of superconducting material.